#### Introduction

Briefly describe the project and overview of fire protection for the building and the scope of work (New building, addition, renovation)

(New fire protection system(s), alteration to existing systems)

## 901.7.1.1 (1)(a) Basis (Methodology) of Design

## **SECTION 1 Building Description**

- a) Building "Use" Group(s)
- b) Total ground floor area of the building
- c) Total area, all floors including basement
- d) Building Height
- e) Number of floors above grade
- f) Number of floors below grade
- g) Construction Type
- h) Occupancy(s) within the building
- i) Hazardous Materials or processes in the building
- j) Storage over 12 ft

## **SECTION 2 Building and Site Access** 901.7.1.1 (2)

- a) Site access for emergency response
- b) Building access for emergency response
- c) Key vault and 24-hour contact information

## **SECTION 3 Applicable Laws, Regulations, Standards**

- a) 780CMR9 Massachusetts Sate Building Code
  - list specific sections
- b) NFPA Standards
  - NFPA 10 Portable Fire Extinguishers
  - NFPA 13-2002 Installation of Sprinkler Systems
  - NFPA 14-2003 Installation of Standpipe Systems
  - NFPA 20-2002 Installation of Fire Pumps
  - NFPA 24-2002 Fire Service Water Mains
  - NFPA 72-2002 Fire Alarm Code
  - NFPA 96-2001 Ventilation and Fire Control for Commercial Cooking Operations
  - Other standards
- c) MGL Chapter 148
  - list specific sections
  - Section 26G Sprinkler Systems
  - Section 26I Sprinkler Systems, Boarding & Lodging
  - Section 26H Sprinkler Systems, 4 or more dwelling units
- d) 527 CMR
  - list CMR number and specific sections
  - CMR 14 Flammable Liquids, Solids & Gasses
  - CMR 31 Carbon Monoxide Alarms

- e) Specialized codes
  - List CMR or code and specific sections
  - 521 CMR Architectural Access
  - 524 CMR Elevator Regulations
  - 248 CMR Gas Code
- f) Amherst By-Laws
  - Key vault
- g) Other State or Federal Laws

## **SECTION 4 Design Responsibility for Fire Protection Systems**

List the name, address, telephone, facsimile, e-mail for the designer or engineer of records who will prepare the shop drawings and construction documents for <u>each</u> fire protection system

## **SECTION 5** Fire Protection Systems to be Installed

List and describe the systems to be installed, the design criteria and the key components of each required and non-required system

## Fire Hydrants and Water Supply 901.7.1.1(3)

- a) Location of existing and new hydrants
- b) Location and size of public water mains
- c) Location and size of private water mains
- d) Location of control valves

#### Sprinkler and Standpipe System 901.7.1.1 (4-8)

- a) Type, hazard class, description and design layout of the sprinkler system(s)
- b) Sprinkler system control equipment location(s)
- c) Type, description and design layout of the standpipe system
- d) Standpipe system hose valve type and location
- e) Fire Department Connection(s) type and location

#### Fire Alarm and Detection 901.7.1.1 (9-10, 13)

- a) Type, description and design layout of the fire protective signaling system
- b) Type, description (total, partial or spot detection) and design layout of the fire detection system
- c) Auxiliary functions integrated as part of the fire protective signaling system
- d) Fire alarm control equipment location(s)
- e) Type and description of annunciator(s)

#### Carbon Monoxide Alarms 901.7.1.1 (21)

a) Type, description and layout of the carbon monoxide alarms

## Alarm Supervisory System 901.7.1.1 (18)

- a) Type and description of alarm supervisory system
- b) Method of transmitting alarm signals to the Fire Department
- c) Method of transmitting trouble and supervisory signals

#### Fire Extinguishers

- a) Hazard Class(es)
- b) Size and Type of Fire Extinguishers
- c) Placement of fire extinguishers

### Fire Extinguishing Systems 901.7.1.1 (14-15)

- d) Type, description and design layout of fire extinguishing system(s)
- e) Location of controls for the fire extinguishing system(s)
- f) Type and description of other functions and features integrated with the fire extinguishing system(s)

### Smoke Control and Exhaust Systems 901.7.1.1 (11-12)

- a) Type, description and layout of the smoke control or exhaust system
- b) Type, description and location of smoke control system/exhaust systems controls

## Auxiliary Life Safety Systems 901.7.1.1 (13)

a) Type, description and layout of auxiliary functions and features to be integrated into the fire alarm or fire suppression and protection systems

### Fire Protection Systems equipment room location 901.7.1.1 (16)

- a) Location of the room(s) in which control systems for fire protection systems are located
- b) Marking of the rooms

# Fire Protection Systems equipment identification an operation signs 901.7.1.1 (17)

- a) List and describe signage provided to identify controls for each system
- b) List and describe operational instructions provided for responders

#### Fire Command Center 901.7.1.1 (19)

- c) Location of fire command center
- d) List and describe equipment in the fire command center

#### Emergency power systems

a) Generator including fuel type and quantity

#### **SECTION 6 Design Methodology**

List and describe the criteria and performance objectives used by the designer for each system

## **SECTION 7 Special Considerations**

Identify and describe factors used by the designer that deviate from the prescriptive requirements of the codes and standards

This section should include interpretations, variances, waivers, elements of performance based design

## **901.7.1.1** (1)(b) **Sequence of Operations**

Describe the operation of the fire protection systems in a non-technical narrative that will provide sufficient information to understand the initiating events and resulting actions. The description shall include the interconnections between building systems

## 901.7.1.1 (1)(c) Testing Criteria

This section outlines the procedure for inspection, testing and acceptance of the fire protection systems. This section contains the detailed information of personnel, methods and approvals

### **SECTION 1 Testing Criteria and Methods**

a) Describe the methods to test fire protection systems individually, the interconnection between fire protection systems and the interconnection with other building systems

b) List the methods (be specific) to be used for testing equipment and devices. Cite applicable standards and manufacturers specifications

## **SECTION 2 Testing Schedule**

- a) List the personnel responsible to schedule and coordinate the testing of each system and the interconnection between systems
  - Designer and engineer of record conduct test of 100% of devices and equipment
- b) The schedule of testing. Include testing by the installer, engineer or designer and the Fire Department
  - Installer's test
  - Engineer's test
  - Fire Department acceptance test

## **SECTION 3 Approvals**

- a) List the approvals by the contractors, designer or engineer of record, Fire Department
  - Test certificates in accordance with NFPA Standards
  - Test certificates in accordance with manufacturer's specifications
- b) List the documentation required for each test, the reports required and distribution
  - Signed affidavit by installer
  - Signed affidavit by designer and engineer of record

Report Prepared by		Date
	signed	